The listing of the claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Please cancel claims 1-54.

Please add new claims 55-94 as follows:

1. – 54. (Cancelled)

55. (New) An induction subsystem for a conveyor sortation system, said induction subsystem comprising:

a plurality of tandem conveying surfaces defining a series of sequentially arranged conveying surface interfaces, at least one of said conveying surfaces associated with each of said conveying surface interfaces being an adjustable-speed conveying surface;

at least one article sensor adjacent at least one of said conveying surface interfaces, said at least one article sensor providing information on positions of the articles;

a control responsive to said at least one article sensor, said control controlling the speeds of said tandem conveying surfaces in a manner that establishes controlled gaps between articles, said control identifies a controllable gap that can be adjusted between articles at a particular conveying surface interface and adjusting the controllable gap at the particular conveying surface interface, said control adjusts the controllable gap by adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface using a feedback controller;

said feedback controller adjusts the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface as a function of a position of at least one article control point with respect to the particular conveying surface interface, said feedback controller monitoring the controllable gap while adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface; and

wherein gaps between articles are sequentially adjusted at said series of sequentially arranged conveying surface interfaces.

56. (New) The induction subsystem of claim 55 wherein said at least one article sensor comprises at least one chosen from a horizontal photo-detector array and a camera.

57. (New) The induction subsystem of claim 55 including another plurality of tandem conveying surfaces upstream of said plurality of tandem conveying surfaces, said another plurality of tandem conveying surfaces defining at least one other conveying surface interface, said control including an open-loop controller, said open-loop controller adjusting gaps between articles at said at least one other conveying surface interface.

58. (New) The induction system of claim 55 wherein said feedback controller comprises a proportional-integral-derivative controller.

59. (New) The induction system of claim 55 wherein said control assumes control points of articles.

60. (New) The induction system of claim 55 wherein said control measures control points of articles upstream of said plurality of tandem conveying surfaces.

61. (New) The induction system of claim 60 wherein said control selects an acceleration value of said variable speed conveying surface as a function of the control point of an article being accelerated.

62. (New) The induction system of claim 55 wherein said feedback controller outputs multiple commands per second to adjust the speed of said adjustable-speed conveying surface.

63. (New) The induction system of claim 55 wherein each of said conveying surface interfaces includes an upstream conveying surface and a downstream conveying surface, wherein said upstream conveying surface comprises said adjustable-speed conveying surface.

64. (New) The induction system of claim 55 wherein each of said conveying surface interfaces includes an upstream conveying surface and a downstream conveying surface, wherein said downstream conveying surface comprises said adjustable-speed conveying surface.

65. (New) An induction subsystem for a conveyor sortation system, said induction subsystem comprising:

a plurality of tandem conveying surfaces defining a series of sequentially arranged conveying surface interfaces, at least one of said conveying surfaces associated with each of said conveying surface interfaces being an adjustable-speed conveying surface;

an article sensor assembly adjacent at least one of said conveying surface interfaces, said article sensor assembly adapted to sensing multiple gaps between articles at a time and repetitively providing information on positions of the articles;

a control responsive to said article sensor assembly, said control controlling the speeds of said tandem conveying surfaces in a manner that establishes controlled gaps between articles, said control identifies a controllable gap that can be adjusted between articles at a particular conveying surface interface and adjusting the controllable gap at the particular conveying surface interface, said control adjusts the controllable gap by adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface using a feedback controller;

said feedback controller adjusts the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface as a function of a position of at least one article control point with respect to the particular conveying surface interface, said feedback controller monitoring the controllable gap while adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface; and

wherein gaps between articles are sequentially adjusted at said series of sequentially arranged conveying surface interfaces.

66. (New) The induction subsystem of claim 65 wherein said article sensor assembly comprises at least one chosen from a horizontal photo-detector array and a camera.

67. (New) The induction subsystem of claim 65 including another plurality of tandem conveying surfaces upstream of said plurality of tandem conveying surfaces, said another plurality of tandem conveying surfaces defining at least one other conveying surface interface, said control including an open-loop controller, said open-loop controller adjusting gaps between articles at said at least one other conveying surface interface.

68. (New) The induction system of claim 65 wherein said feedback controller comprises a proportional-integral-derivative controller.

69. (New) The induction system of claim 65 wherein said control assumes control points of articles.

70. (New) The induction system of claim 65 wherein said control measures control points of articles upstream of said plurality of tandem conveying surfaces.

71. (New) The induction system of claim 70 wherein said control selects an acceleration value of said variable speed conveying surface as a function of the control point of an article being accelerated.

72. (New) The induction system of claim 65 wherein said feedback controller outputs multiple commands per second to adjust the speed of said adjustable-speed conveying surface.

73. (New) The induction system of claim 65 wherein each of said conveying surface interfaces includes an upstream conveying surface and a downstream conveying surface, wherein said upstream conveying surface comprises said adjustable-speed conveying surface.

74. (New) The induction system of claim 65 wherein each of said conveying surface interfaces includes an upstream conveying surface and a downstream conveying surface, wherein said downstream conveying surface comprises said adjustable-speed conveying surface.

75. (New) A method of controlling gaps between articles traveling on a conveyor system, said method comprising:

providing a plurality of tandem conveying surfaces defining a series of sequentially arranged conveying surface interfaces, at least one of said conveying surfaces associated with each of said conveying surface interfaces being an adjustable-speed conveying surface;

providing at least one article sensor adjacent at least one of said conveying surface interfaces and sensing articles with said at least one article sensor, including providing information regarding positions of the articles;

controlling the speeds of said tandem conveying surfaces in response to said information regarding positions of the articles in a manner that establishes controlled gaps between articles, including identifying a controllable gap that can be adjusted between articles at a particular conveying surface interface and adjusting the controllable gap at the particular conveying surface interface, said adjusting the controllable gap including adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface using a feedback controller;

said feedback controller adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface as a function of a position of at least one article control point with respect to the particular conveying surface interface, said feedback controller monitoring the controllable gap while adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface; and

sequentially adjusting gaps between articles at said series of sequentially arranged conveying surface interfaces.

76. (New) The method of claim 75 wherein said at least one article sensor comprises at least one chosen from a horizontal photo-detector array and a camera.

77. (New) The method of claim 75 including providing another plurality of tandem conveying surfaces upstream of said plurality of tandem conveying surfaces, said another plurality of tandem conveying surfaces defining at least one other conveying surface interface, and further including providing an open-loop controller and adjusting gaps between articles with said open-loop controller at said at least one other conveying surface interface.

78. (New) The method of claim 75 wherein said feedback controller comprises a proportional-integral-derivative controller.

79. (New) The method of claim 75 including assuming control points of articles.

80. (New) The method of claim 75 including measuring control points of articles upstream of said plurality of tandem conveying surfaces.

81. (New) The method of claim 80 wherein said control selects an acceleration value of said variable speed conveying surface as a function of the control point of an article being accelerated.

82. (New) The method of claim 75 wherein said feedback controller outputs multiple commands per second to adjust the speed of said adjustable-speed conveying surface.

83. (New) The method of claim 75 wherein each of said conveying surface interfaces comprises an upstream conveying surface and a downstream conveying surface, wherein said upstream conveying surface comprises said adjustable-speed conveying surface.

84. (New) The method of claim 75 wherein each of said conveying surface interfaces comprises an upstream conveying surface and a downstream conveying surface, wherein said downstream conveying surface comprises said adjustable-speed conveying surface.

85. (New) A method of controlling gaps between articles traveling on a conveyor system, said method comprising:

providing a plurality of tandem conveying surfaces defining a series of sequentially arranged conveying surface interfaces, at least one of said conveying surfaces associated with each of said conveying surface interfaces being an adjustable-speed conveying surface;

providing an article sensor assembly adjacent at least one of said conveying surface interfaces and sensing with said article sensor assembly multiple gaps between articles at a time, including repetitively providing information regarding positions of the articles;

controlling the speeds of said tandem conveying surfaces in response to said information regarding positions of the articles in a manner that establishes controlled gaps between articles, including identifying a controllable gap that can be adjusted between articles at a particular conveying surface interface and adjusting the controllable gap at the particular conveying surface interface, said adjusting the controllable gap including adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface using a feedback controller;

said feedback controller adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface as a function of a position of at least one article control point with respect to the particular conveying surface interface, said feedback controller monitoring the controllable gap while adjusting the speed of the adjustable-speed conveying surface associated with the particular conveying surface interface; and

sequentially adjusting gaps between articles at said series of sequentially arranged conveying surface interfaces.

86. (New) The method of claim 85 wherein said article sensor assembly comprises at least one chosen from a horizontal photo-detector array and a camera.

87. (New) The method of claim 85 including providing another plurality of tandem conveying surfaces upstream of said plurality of tandem conveying surfaces, said another plurality of tandem conveying surfaces defining at least one other conveying surface interface, and further including providing an open-loop controller and adjusting gaps between articles with said open-loop controller at said at least one other conveying surface interface.

88. (New) The method of claim 85 wherein said feedback controller comprises a proportional-integral-derivative controller.

89. (New) The method of claim 85 including assuming control points of articles.

90. (New) The method of claim 85 including measuring control points of articles upstream of said plurality of tandem conveying surfaces.

91. (New) The method of claim 90 wherein said control selects an acceleration value of said variable speed conveying surface as a function of the control point of an article being accelerated.

92. (New) The method of claim 85 wherein said feedback controller outputs multiple commands per second to adjust the speed of said adjustable-speed conveying surface.

93. (New) The method of claim 85 wherein each of said conveying surface interfaces comprises an upstream conveying surface and a downstream conveying surface, wherein said upstream conveying surface comprises said adjustable-speed conveying surface.

94. (New) The method of claim 85 wherein each of said conveying surface interfaces comprises an upstream conveying surface and a downstream conveying surface, wherein said downstream conveying surface comprises said adjustable-speed conveying surface.